Welcome and Introduction to the ECS August Demonstration

August 28, 1997

Joe Senftle

August Demo Schedule

[Auditorium](#)

- Welcome and Introduction   Dawn Lowe   8:00 a.m. - 8:05 a.m.
- August Demo Overview   Joe Senftle   8:05 a.m. - 8:30 a.m.
- System Functionality Overview   Mike Burnett 8:30 a.m. - 9:00 a.m.

[Computer Room](#)

- Demonstration of ASTER, MODIS, and Landsat System Usage
- Review of Pre-Demo Activities

August Demo

Original Intent

Demonstrate progress on critical functional capabilities as defined by the DSWG

Science Community Desires
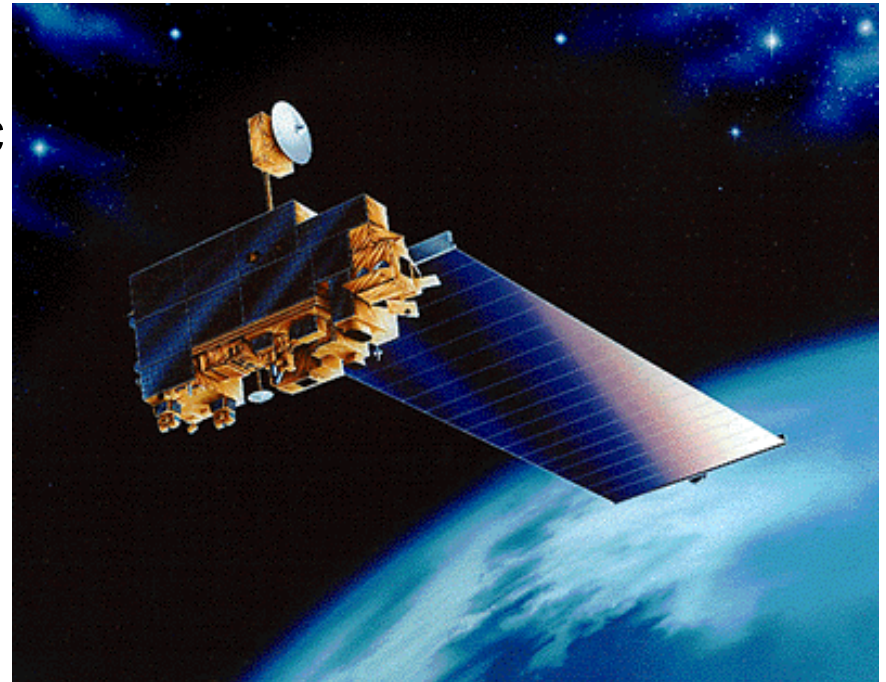
- **Stress Test**
- **Full Performance**
- **Go/No Go**

Today

- **Critical functional capabilities**
- **Ingest performance and plan**
- **IT Data and PGEs**
- **Ongoing test program**

IT-provided Data and Science Software

- Landsat-7, MODIS, and ASTER Provided Instrument Data
- Integrated Production Science Software
  - 3 ASTER PGEs
  - 2 MODIS PGEs, 1 Synthetic
- Landsat LPS Simulator

Perspective

- **ASTER and MODIS scenarios are in the Mini-DAAC.**

  - Software has been delivered from the development environment.

  - ASTER and MODIS are running in different modes to demonstrate the ability to run separate test and production instances.

- **Landsat is being demonstrated from development's Integration Environment.**
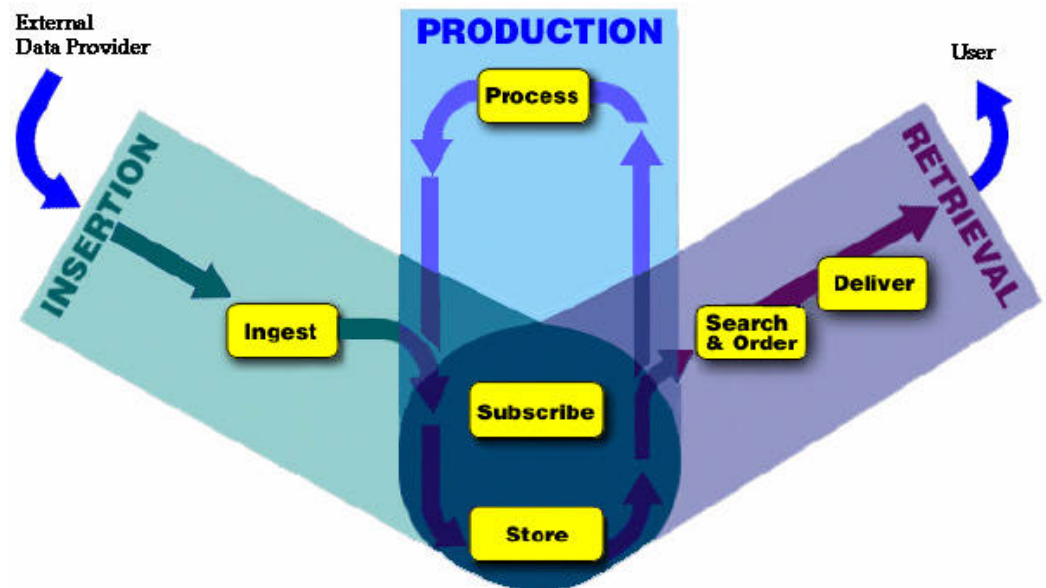
- **Testing is in early stages.**

Work in Progress

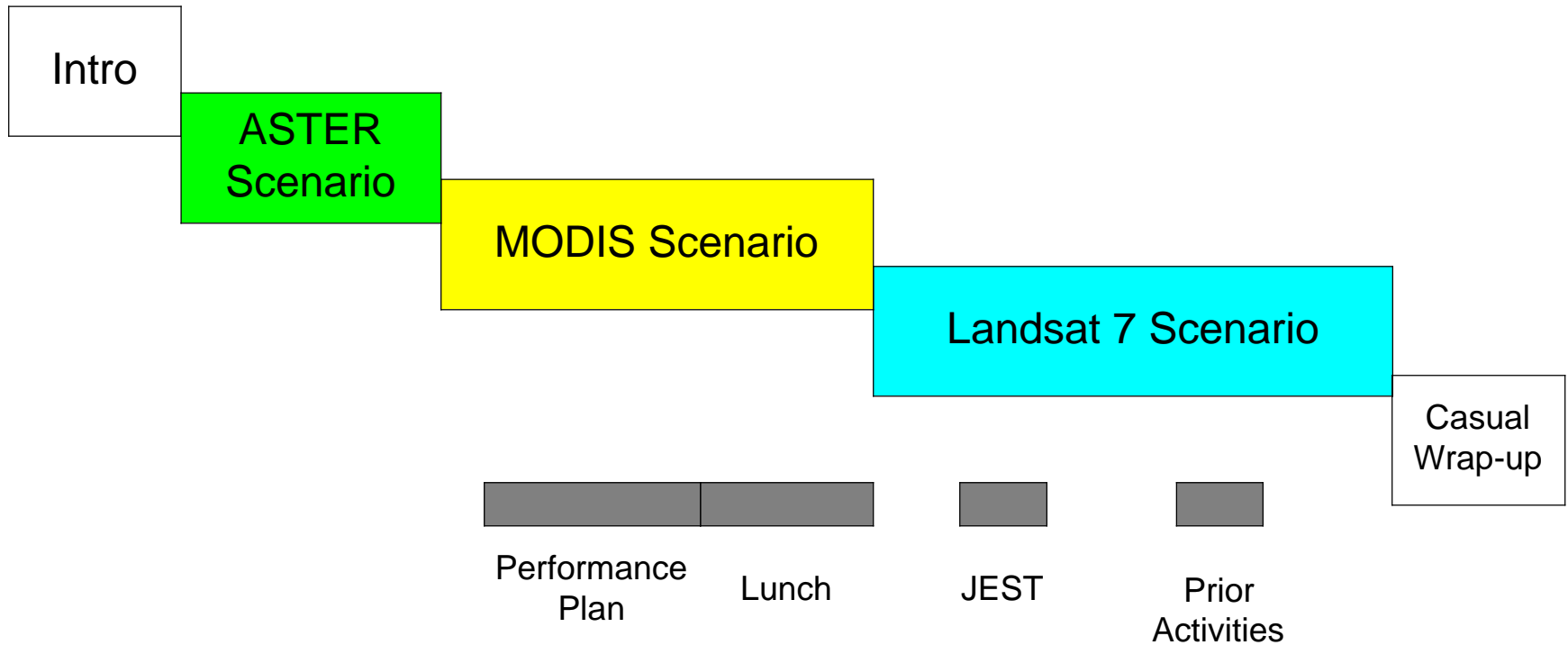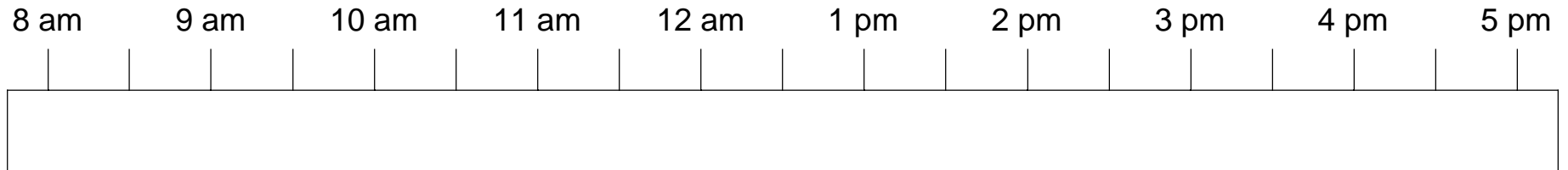| Component	Action	Ramification
Landsat-7	Move into Mini-DAAC Optimization (NFS Mount Points, 8MM tape block sizes, etc.)	Faster end to end system response time
Storage Management	Move to SGI	Faster transfer rates
Science Data Server	Move to multi-threaded Sybase Client	Faster query response time

Pre-Demonstration Activities

- Measured ECS Ingest Performance using MODIS Level 0 data granules

- Performance Plan

- Demonstrated Ingest Interface using EDOS protocol
  - EDOS provided L0 AM-1 data, Polling with delivery record

- Ingested and Archived ASTER Level 1A & 1B granules from D3 tape

- Converted AM-1 Ancillary data into Orbit and Attitude info using DPREP PGE

Functionality to be Demonstrated

- Components
  - External Interfaces
  - Data Insertion
  - Data Production
  - Data Archive
  - Data Access &
    Quality Assurance

August Demo Schedule

| 8 am | 9 am | 10 am | 11 am | 12 am | 1 pm | 2 pm | 3 pm | 4 pm | 5 pm |

Intro

ASTER Scenario

MODIS Scenario

Landsat 7 Scenario
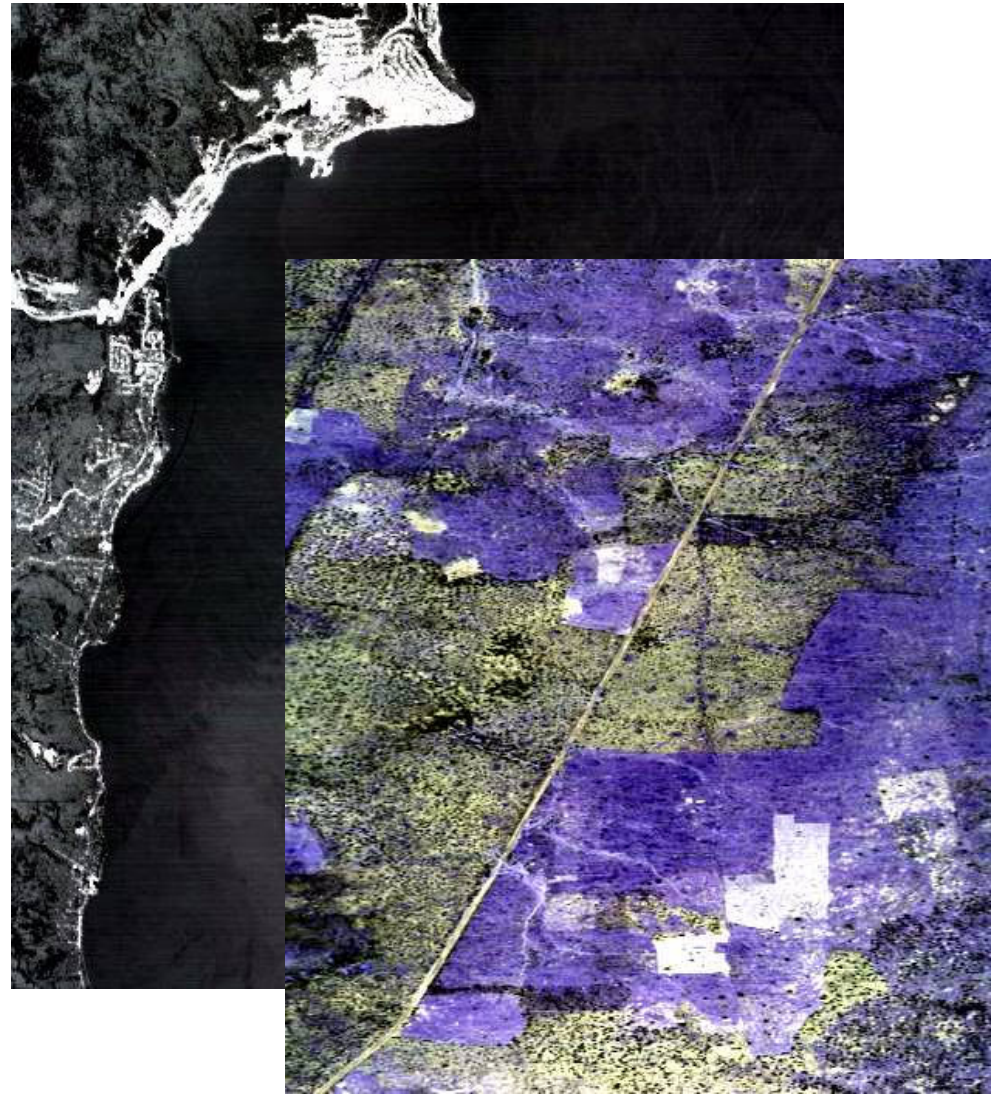
Casual Wrap-up

Performance Plan

Lunch

JEST

Prior Activities

ASTER Scenario
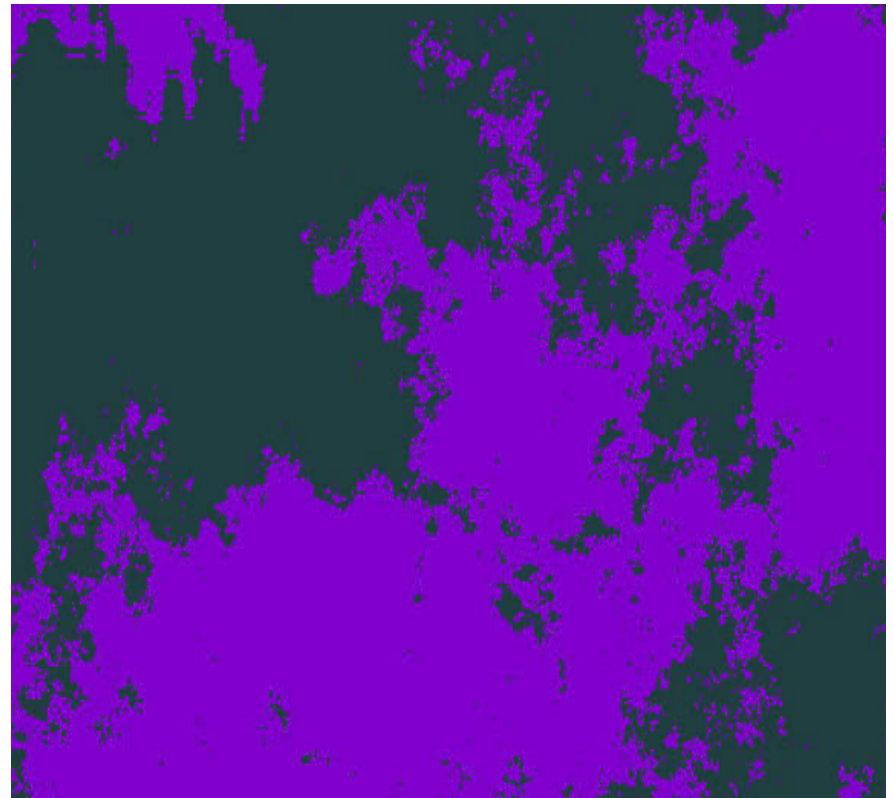
- DAR Submit
- Insertion
- Viewable Metadata
- Subscriptions
- Backward Chaining
  Workaround

MODIS Scenario

- Create Standing Order
- Activate Production Plan
- Produce Data from L1A - L1B - L2
- Search, Order, and View
- Handling of Failed PGEs

PGE 08 Sea Ice Cover output

Landsat-7 Scenario

- User Registration
- Insertion
- Retrieval
- Browse
- Order

*Fixed-Scene Subsetting

August Demo Status - 8/18/97

Criteria	Status	Scenarios	Comments
1. External Interfaces			
1.1 Demonstrate ASTER DAR submission.	4	ASTER	
1.2.1 Show that the system can support the EDOS PDS interface protocol.	P	Prior	Using EDOS PDS.
1.2.2 Show that the system can support the EDOS EDS interface protocol.	4	ASTER	Using EDOS EDS.
1.2.3 Show that the system can support the LPS interface protocol.	?	L7	Using L7 simulator. Install simulator 8/18.
1.2.4 Show that the system can support the IAS interface protocols.	4	L7	
1.3 Show that the system can support expedited data access to ASTER L0.	4	ASTER	Using EDOS AST00.
2. Data Ingest			
2.1.1 Demonstrate ingest of AM-1 Level 0 data.	4	ASTER, Prior	Using EDOS L0.
2.1.2 Demonstrate ingest of ASTER L1A and L1B data from D3 tape.	?	Prior	Using tweaked May ASTER tape.
2.1.3 Demonstrate ingest of Landsat-7 L0R.	4	L7	Using L7 simulator & in-house data.
2.1.4 Demonstrate ingest of IAS calibration parameter files.	4	L7	
2.2 The system must support > 50% of its at-launch (3.0 Mbytes/s) ingest rates.	P	Prior	Achieved 3.0 MBytes/s.
3. Data Production			
3.1.1 Show that archived data can be used as input to PGE execution.	4	ASTER, MODIS	
3.1.2 Show that archived ancillary data can be used as input to PGE execution.	4	ASTER	
3.2 Show that the insertion of data into the archive can cause the automatic scheduling of PGE executions.	4	ASTER, MODIS	
3.3 Show concurrent execution of PGEs that have different resource needs, preferably using a mix of ASTER and MODIS PGEs.	4	MODIS	MODIS and ASTER separate.
3.4.1 Demonstrate that the system can support the Advanced Temporal production rule.	4	MODIS	

Legend:

P - Completed

4 - Working in development environment

? - In progress

6 - Not in demo

August Demo Status - 8/18/97

Criteria	Status	Scenarios	Comments
3.4.2 Demonstrate that the system can support the Metadata-based Activation production rule.	6		Advanced production rule. Not in demo.
3.4.3 Demonstrate that the system can support the Orbit-based Activation production rule.	6		Advanced production rule. Not in demo.
3.4.4 Demonstrate that the system can support the Alternate Inputs (including timers and use of ancillary data) production rule.	6		Advanced production rule. Not in demo.
3.4.5 Demonstrate that the system can support the boundary and period specifications production rule.	4	ASTER, MODIS	
3.5 Show that the system can support multiple runs of the same PGE.	N/A	RC11	Scheduled for early SSI&T.
3.6 Show that the output of one PGE can be used as the input of another PGE, preferably using an ASTER or MODIS end-to-end processing thread	4	ASTER, MODIS	
3.7 Show that the system can handle failed PGE executions.	4	ASTER	Fail BTS.
3.8.1 Demonstrate support for converting AM-1 ancillary packets into orbit files.	?	Prior	
3.8.2 Demonstrate support for converting AM-1 ancillary packets into attitude files.	?	Prior	
3.9 Demonstrate the B.0' workaround for ASTER on-demand processing and backward chaining.	4	ASTER	
4. Data Archive			
4.1.1 Show that ingested data are catalogued and archived so that they can be located and retrieved for production and distribution.	4	All	
4.1.2 Show that data resulting from production are catalogued and archived so that they can be located and retrieved for production and distribution.	4	ASTER, MODIS	
5. Data Access and QA			
5.1.1 Demonstrate that an SCF can acquire and view production results to perform QA.	4	ASTER	
5.1.2 Demonstrate that a DAAC operator can update QA metadata on behalf of the SCF.	4	ASTER	
5.2.1 Show that the system supports user registration.	4	L7	

Legend:

P - Completed

4 - Working in development environment

? - In progress

6 - Not in demo

456-PP-003-001

August Demo Status - 8/18/97

Criteria	Status	Scenarios	Comments
5.2.2 Show that the system supports user login.	4	ASTER, L7	DAAC desktop, Science desktop
5.3.1 Show that the B.0' Version 0-like Client allows a user to perform directory searches.	4	L7	Through BOSOT
5.3.2 Show that the B.0' Version 0-like Client allows a user to perform inventory searches.	4	ASTER, L7	
5.4.1 Show that a user can order any archived data to be delivered electronically via FTP.	4	L7	Browse only
5.4.2 Show that a user can order any archived data to be delivered through mail via 8mm tape.	4	L7	Scene
5.5 Show that the system supports user orders for Landsat-7 scene data, which is generated on-the-fly using subsetting services	?	L7	Using in-house data.
5.6.1 Show that an operator can submit subscriptions on behalf of a user.	4	ASTER	
5.6.2 Show that an operator can submit standing orders on behalf of a user.	4	MODIS	Standing order for Sea Ice.
5.7.1 Show that the system can distribute data in response to a subscription order electronically via FTP.	4	ASTER	
5.7.2 Show that the system can distribute data in response to a client order electronically via FTP.	4	L7	Browse only
5.7.3 Show that the system can distribute data in response to subscription order via 8mm tape.	4	MODIS	MODIS Sea Ice.
5.7.4 Show that the system can distribute data in response to client order via 8mm tape.	4	L7	L7 Scene
5.8 Demonstrate that operations staff can obtain order status from the system.	4	L7	Using DSS GUI
5.9 Show that the system can support simultaneous orders from multiple users.	?	L7	Concurrent 8mm and FTP scenes.
5.10 Show that a user can use EOSView to view data that are distributed to them.	4	ASTER, L7	Need latest version for L7 Browse.

Legend:

P - Completed

4 - Working in development environment

? - In progress

6 - Not in demo

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Mapping DSWG to Scenarios

	Critical Function	Scenario
1	S/C & Instrument Ops	< Not applicable >
2	Capture Data	ASTER DAR, MODIS
3	Ingest/Archive source data at DAACs	ASTER, Landsat
4	Backup Ancillary Data	< Not scheduled for Demo >
5	Catalog Data	ASTER, MODIS, Landsat
6	Retrieval of Source Data	ASTER, MODIS, Landsat
7	Run PGEs	ASTER, MODIS
8	IT Retrieval of products	ASTER, MODIS
9	Run PGEs for testing/QA	Formal SSI&T
10	Retrieval of products by ITs across DAACs	ASTER, MODIS < Single DAAC Demo, available for others >
11	Production Processing	ASTER, MODIS
12	Retrieval of data across DAACs	ASTER, MODIS, Landsat < Single DAAC Demo, available for others >